

Atty Dkt. No.: CLON-037CON
USSN: 09/839,696

REMARKS

In view of the following remarks, the Examiner is respectfully requested to withdraw the rejections and allow claims 14, 15, 17, 39-42 and 44, the only claims pending and currently under examination in this application.

Claims 14 and 44 have been amended to include the limitation that the step of conjugating aspartic acid to the oxirane-agarose occurs at about 80°C for 4 hours. Support for this amendment can be found in original Claim 16 and in the specification at page 9, lines 8-10.

As the above amendments introduce no new matter, their entry by the Examiner is respectfully requested.

Claim Rejections – 35 USC §102

Claims 14-17, 39-42 and 44 are rejected under 35 U.S.C. § 102 (b) as being anticipated by Mantovarra et al. (Biotechnology and Applied Biochemistry, 1991, 13:315-322) and Porath et al. (US 3,853,708).

As stated in MPEP §2131:

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

The subject invention is claims a method for synthesizing carboxymethylated aspartate agarose chelating resin including the steps of: (a) forming oxirane-agarose; (b) conjugating aspartic acid to the oxirane-agarose to produce aspartate agarose in which the reaction is carried out at 80°C for 4 hours; (c) carboxymethylating the aspartate agarose to produce carboxymethylated aspartate agarose; and (d) complexing the carboxymethylated aspartate agarose with a transition metal ion other than Ca²⁺ to produce a complex that offers two available valencies.

The Examiner asserts that Mantovarra et al. teaches all of the steps of the claimed invention, citing Porath et al. as demonstrating that treating Sepharose with epichlorohydrin (as disclosed in Mantovarra et al.) produces an oxirane ring (step (a) of

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the claimed invention.

As indicated above, the Applicants have amended Claims 14 and 44 to include the limitation that the aspartic acid/oxirane ring conjugating step (b) is carried out at 80°C for 4 hours (original claim 16). This limitation is not taught in Mantovarra et al. (nor in Porath et al.). Indeed, in item 4 of the Office Action the Examiner states that the conjugation step of Mantovarra et al. is carried out at room temperature. As stated in the specification of the subject application (page 4, lines 26-28) "[t]he improvement [over previous methods] includes particular conditions for oxirane ring formation, temperature controlled conjugation of aspartic acid to the oxirane agarose, and high ionic strength washing to remove extraneously bound metals" (emphasis added).

Therefore, because Mantovarra et al. and Porath et al. fail to teach each and every element of the claimed invention, withdrawal of this rejection is respectfully requested.

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CONCLUSION


In view of the amendments to the claims and the remarks above, the Applicants consider this application to be in good and proper form for allowance and the Examiner is respectfully requested to pass this application to issuance.

The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-0815, order no. CLON-037CON.

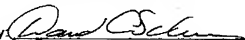
Respectfully submitted,

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